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AUTHOR Heidelbach, Ruth
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ABSTRACT

A 10-year study is exploring the understanding and validation of the curricular decision making process in an early childhood teacher education curriculum. The inquiry focuses on four major questions: (1) Do teacher educators integrate data describing various aspects of teacher preparation, teacher practice, and pupil performance into their curricular decision making? (2) What conclusions do teacher educators generate related to the data? (3) Are the conclusions integrated into the curriculum making process? and (4) How is the teacher education curriculum changed as the result of data integration? Answers to these questions will reveal what happens, when, why, and to whom, and will establish a clearer picture of teacher education trends, effects, and changes. Population for the study includes, for each year, approximately 250 teacher education students beginning their professional preparation. Study of their development will continue through the 10-year research project. Faculty/administrative curriculum decision makers involved in pre- and in-service teacher education will also be used as subjects. Part I of this document, a prospectus, describes the research project under way, including information on purposes of the investigation, background, significance, methodology, data collection and analysis, and suggestions for dissemination. Part II is a narrative report on activities of the first year of the study (1982). (JD)

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A LONGITUDINAL STUDY OF TEACHER EDUCATION CURRICULUM: A FIRST YEAR REPORT USING QUANTITATIVE AND QUALITATIVE METHODS

RUTH HEIDELBACH

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A LONGITUDINAL STUDY OF TEACHER EDUCATION CURRICULUM: A FIRST YEAR REPORT USING QUANTITATIVE AND QUALITATIVE METHODS

RUTH HEIDELBACH

DEPARTMENT OF CURRICULUM AND INSTRUCTION
COLLEGE OF EDUCATION
UNIVERSITY OF MARYLAND
COLLEGE PARK, MARYLAND

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PART I

BACKGROUND TO THE REPORT

PART I

TEACHER EDUCATION CURRICULUM DEVELOPMENT: A LONGITUDINAL STUDY

Ruth Heidelbach

This prospectus describes a research project under way and includes purposes of the investigation, background, significance, methodology and suggestions for dissemination.

Because of the current status of teacher education in our nation and the obvious changes which will confront teacher educators in the next decade, it seemed from the perspective of this experienced teacher educator that a longitudinal study such as the one described here is long over due and one that would be very helpful to future teacher educators looking for over time descriptions of curricular phenomena. (Ayers, Dravland and Green)

Since 1929 there have been periodic reports reviewing and studying teacher education each focusing on the current status of the profession. In 1983 we have a wealth of dependable knowledge upon which we can design curricula in teacher education (Smith). However, few efforts to describe teacher education at the pre and inservice levels are longitudinal in scope. A review of the literature since early 1965 finds approximately 30 studies which are longitudinal in nature. Some of the research is focused on aspects of of preparation and methodology which will prove helpful to

this investigator in determining fruitful and nonfruitful directions to take. No research was found which focused on the questions raised in this study. A bibliography identifying the literature review will be prepared and updated as the investigation proceeds.

It is interesting to note that item descriptions in ERIC since 1966 list 31,537 entries for teacher education, 9,427 for teacher education curriculum, and 3,160 for teacher education research.

Although definitions of longitudinal research seem to be related to a discipline emphasis, the common thread seems to be that the research center on "how and why a phenomena exists in time in relation to aspects of both consistency and change" (Nesselrode and Baltes). Studies of curricular phenomenon which focus on the larger and over time aspects of practice have not been emphasized frequently. However, it is well established that longitudinal inquiry is used frequently in the behavioral sciences. McClure seemed to capture the essence of the need in saying, "Studies which move behind the scenes of planning in order to conceptualize the acts of curriculum at the institutional level are needed for a clearer understanding of how to go about improving the process of curriculum development" (Goodlad).

Much discussion abounds in the literature with regard to inquiry modes in relation to examination of education decision

making. Guba has set forth helpful discussions on the use of naturalistic methodologies in carrying out curriculum inquiry. In a recent CSE monograph he has outlined the value of naturalistic inquiry which is helpful in both supporting the methodology being developed in this study and to illuminate the characteristics of this type of research, the need for such studies and the manner in which this mode differs from conventional modes. He details 14 areas of difference which deal with philosophical base, inquiry, paradigm, stance, design, reality, value, setting, context, conditions, treatment, scope and methods (Guba). The methodology and design of this study follows closely these differences because of the nature of the questions asked, the problems to be solved and addressed within the setting of the study and the need for longitudinal naturalistic inquiry in understanding the dynamics of curricular decision making in teacher education. (Corrigan, Griffin and Hukill)

OVERVIEW

The study outlined here has as its purpose the understanding and validation of the process of curricular decision making in an early childhood teacher education curriculum over a ten year period.

The following are major questions which focus the inquiry:

1. Do teacher educators integrate data describing various aspects of teacher preparation, teacher practice and pupil performance into their curricular decision making?

2. What conclusions do teacher educators generate related to the data?

3. Are the conclusions integrated into the curriculum making process?

4. How is the teacher education curriculum changed as a result of data integration?

Answers to the focal questions, in essence, will illuminate and reveal what happens, when, why, to whom and will be fruitful in establishing a clearer picture of teacher education trends, effects, and changes. Such knowledge holds promise for adding to theoretical constructs needed in professional preparation programs. Argyris and Schon have postulated that difficulties in professional preparation are related to "Incongruities between espoused theories and theories in use ...obsolete or consensual theory and few espoused but effective theories in use" (Argyris and Schon).

Recent conversations with members of the AERA SIG on Teacher Education, as well as Deans and professors of teacher education illuminate the persistent and troublesome reality that for so long teacher educators have put off a broad look at what is happening in the relationship between pre and in-service teacher education, professional practice, learning environments and learner performance. Smith's distinguished perspectives and proposals developed in "A Design for a School of Pedagogy" suggests that the arena for action in the insti-

tutional context (Smith). This study focuses on one institution at the preservice level and numerous ones at the inservice level, but collectively these are one institution with the goal of preparing teachers who will collectively carry out the aims of education.

The study begins in a time of pervasive curricular and management change in a college of education, a new department of curriculum and instruction and in a unit of the department having responsibility for preservice and graduate preparation of teachers and leaders in ECE.

Investigators studying professional teacher education to date have rarely designed research which has as its purpose the identification of theoretical bases for the relationships among teacher preparation curricula at the preservice and inservice level, teacher performance in practice, educational environments designed for learners and learner outcomes. Indeed, the task is large and calls for a state of knowledge that is just beginning to emerge (Medley).

With the steady increase in programs to prepare teachers for young children over the last fifteen years and the prediction of increased enrollments of children in preprimary programs, it is at this point in time that responsible scholars in higher education respond to the problem of the preparation of effective professionals (Spodek). Also, with the clear understanding that resources for education at all levels will

be much less than adequate, it is imperative that the next decade find a number of studies similar to this one searching for valid understandings of the way in which curricula in higher education at the baccalaureate and graduate level could be designed so that resources in the formal curricula can be allocated in the most efficient and effective manner.

The model which will be utilized as a conceptual framework for this investigation has been set forth by Medley. He has identified levels of assessment of teacher performance in teacher education as (1) training experiences, (2) teacher performance, (3) learner experiences and (4) learner outcomes (Medley).

During the period of 1982-1992 the nature of these levels will be integrated into decision making processes as curriculum in teacher education is developed. Ongoing descriptions of curricular change attributed to the integration of data into curriculum development processes will be created.

While Medley's model is focused on assessment which is not directly the goals of this investigation, it is useful in seeking answers to the questions raised here since it sets the parameters of teacher education curriculum and professional practice and is used frequently in designing studies of teaching.

Qualitative data will be collected on the organization and anatomy of the group being studies, imponderabilia of

actual life of the group, and feelings, opinions and typical utterances of the group's members (Goodwin and Driscoll). These data will begin with descriptive observations, move on to more focused observations and end with selected observations (Spradley). Sources of the data will be direct observation of systematically selected aspects of the total range of levels suggested by Medley through direct observation, interviews, analysis of participant journals, records and other artifacts of the framework. Questions which focus the data collection are what happens, when, how, why and to whom. Validation of the findings will be determined through interaction with and among members of research teams and the teacher educator subjects of the investigation.

Quantitative data will be collected on selected variables directly related to critical aspects of the four levels of assessment. Measures will be identified initially based on judgements of the major investigator and associated teacher education faculty. Subsequent measures will be identified through the integration process. (Carter, Denton and Morris)

METHODOLOGY

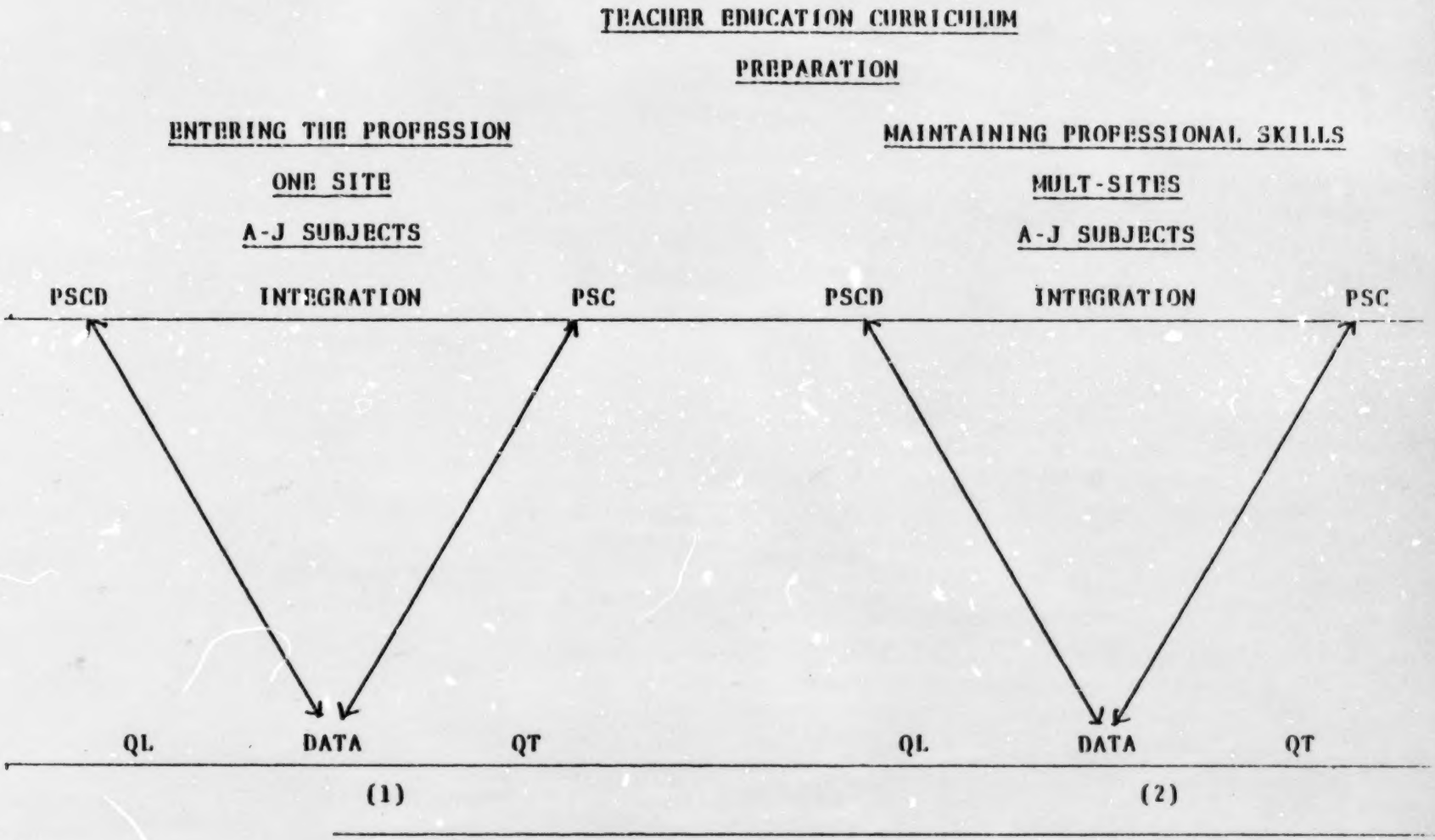
There are four major aspects of methodology which compromise a process through which answers to the research questions are sought. There is (1) data production and collection, (2) data treatment and analysis, (3) introducing data flow for possible integration and (4) tracking of the

impact of data integration through preparation and practice phases. Figure I displays these aspects with details to be discussed. The population for the study includes approximately 250 individuals preparing to teach young children who will begin their professional preparation each year and continue the study of their practice through the next ten years and also faculty/administrative curricular decision makers involved in pre and inservice teacher education provided for individuals preparing the teach. See Figure II.

DATA TREATMENT AND ANALYSIS

During each year of the study, teacher education curriculum decision makers (CDM) will be introduced to a data flow in the form of findings from qualitative and quantitative data analysis. See Figure III and IV. Introduction of the data flow takes place through "integration events." There are four types of events. Type A is a regularly scheduled meeting of CDM. Type B is individual accessing of the data flow through conversations with investigators and/or other CDM. Type C is individuals accessing of data flow through an examination of the data through the database stored in a microcomputer system developed for this project. Type D is consultation activities which may include CDM and/or direct feedback to CDM from consultation sessions. Type E is other and will emerge and be identified by the investigator.

FIGURE 1



PSCD---PRESERVICE CURR. DEV.
PS-----PRESERVICE CURR.
ISCD---INSERVICE CURR. DEV.
ISC----INSERVICE CURR.

QL---QUALITATIVE DATA
QT---QUANTITATIVE DATA

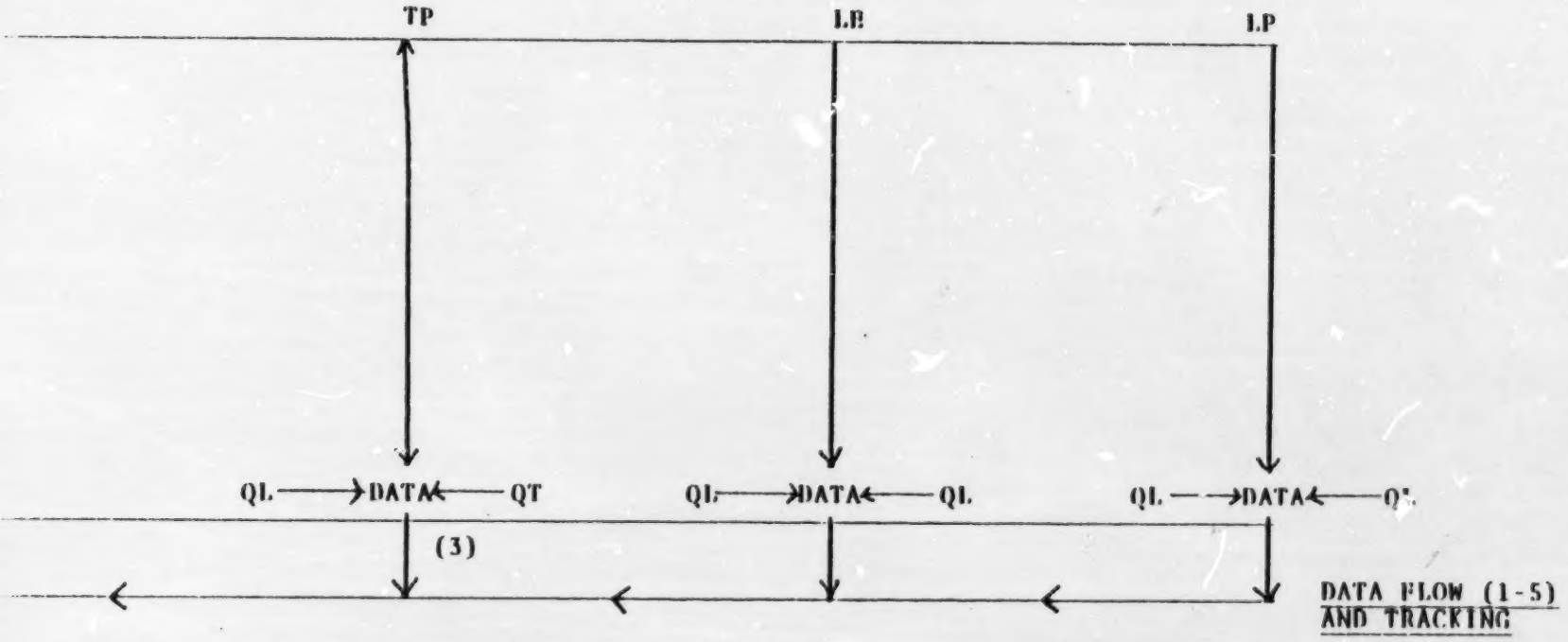
TP--TEACHER PERFORMANCE
LE--LEARNER ENVIRONMENT
LP--LEARNER PERFORMANCE

FIGURE 1 CONT.

PROFESSIONAL PRACTICE

PERFORMANCE

A-J SUBJECTS



S = Student
F = Faculty

Figure 11 - Data Cells for Population

PS = PreService

IS = Inservice

	Pre-Service				Inservice													
Study Year	1		2		3		4		5		6		7		8		9		10	
Tch Ed Year	1PS		2PS		1IS		2IS		3IS		4IS		5IS		6IS		7IS		8IS	
82-83	AS	AF																		
83-84	BS	BF	AS	AF																
84-85	CS	CF	BS	BF	AS	AF														
85-86	DS	DF	CS	CF	BS	BF	AS	AF												
86-87	ES	EF	DS	DF	CS	CF	BS	BF	AS	AF										
87-88	FS	FF	ES	EF	DS	DF	CS	CF	BS	BF	AS	AF								
88-89	GS	GF	FS	FF	ES	EF	DS	DF	CS	CF	BS	BF	AS	AF						
89-90	HS	HF	GS	GF	FS	FF	ES	EF	DS	DF	CS	CF	BS	BF	AS	AF				
90-91	IS	IF	HS	HF	GS	GF	FS	FF	ES	EF	DS	DF	CS	CF	BS	BF	AS	AF		
91-92	JS	JF	IS	IF	HS	HF	GS	GF	FS	FF	ES	EF	DS	DF	CS	CF	BS	BF	AS	AF

FIGURE III

Data Flow

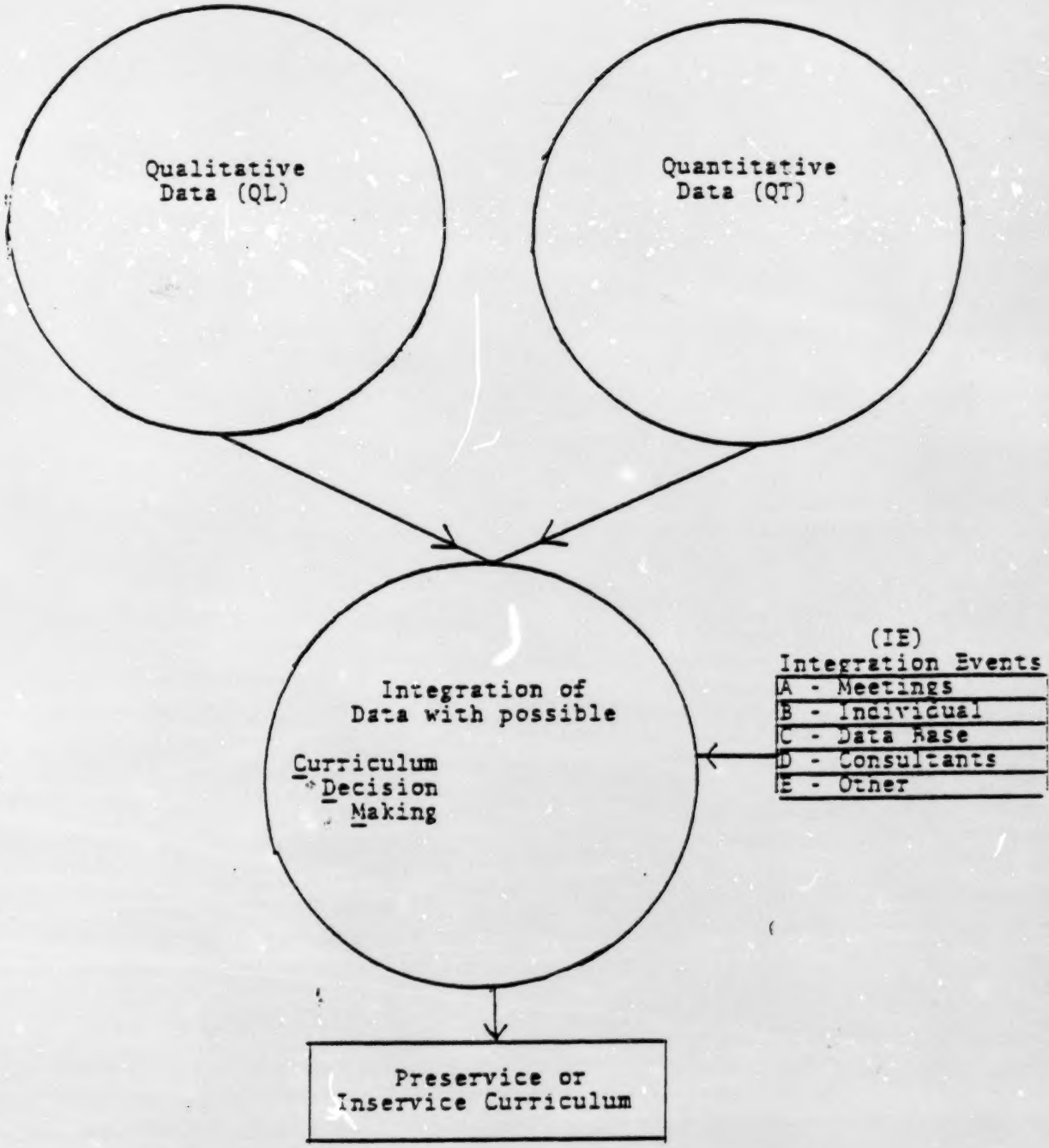


FIGURE IV

PRODUCING AND COLLECTING DATA		TREATING AND ANALYZING DATA		INTRODUCING AND INTEGRATING DATA	TRACKING DATA FLOW
QT	QL	QT	QL	ABCDE TYPES	1 - 5 STAGES
(VARIABLES)					
EDUCATION	OBSERVATIONS	ANOVA	FIELD ANALYSIS	A-MEETINGS	1-PRESER.
SOCIAL	INTERVIEWS	PEARSON CORR.	CODING	B-INDIVIDUAL	2-INSER.
PSYCHOLOGICAL	JOURNALS	MULTIPLE REG.	CLASSIFYING	C-DATABASE	3-TP
POLITICAL	CONSULTANTS	PATH ANALYSIS	TAXONOMIC ANAL.	D-CONSULTANT	4-LS
CULTURAL	CRITICAL EVENTS	OTHER	COMPONENTIAL ANAL.	E-OTHER	5-LP
OTHER	OTHER		OTHER		

Having been introduced to the data flow, CDM will draw conclusions regarding the meaning that the data have for them as they make their curriculum decisions (CD). CDM will either take action on the information or they will not. Tracking the flow of this action will take place through observations of CDM sessions, interviews, unscheduled critical events and journals.

DATA SOURCES AND COLLECTION

As stated earlier, data will be collected during each year of the study and will include both qualitative and quantitative sources. During the first year qualitative sources are to be developed using (1) participant observations of samples from all components of the teacher education curriculum (TEC), (2) interviews of the subjects, (3) subject journals, (4) consultant feedback and (5) unscheduled critical events. (Clark and Yinger)

Moderate to complete participant observation will be used as described by Spradley in which the investigators attempt to balance a role of insider-outsider stance. Careful notes are kept and some participation in activities by the observer takes place. The observers will be trained and will have had experience as educators. Some observers will be active persons with regular status in the setting. In this case, the observer is a complete participant. Some of the observations will be descriptive, some focused and some selective (Spradley).

Preparation of the observations for analysis and introduction into the data flow occurs through a process of componential analysis which is a search for the attributes associated with the phenomena under observation. This analysis takes place as observers contrast their observations and emerging attributes in an attempt to set forth a complete categorical description of the phenomena. Records are kept and a paradigm created (Spradley).

Both structured and unstructured interviews will be carried out. Structured interviews will be designed using emerging categories from the observations. Subjects for the interviews will be sampled from the population using stratified techniques. Unstructured interviews will take place as critical events occur for the purpose of gaining insights for the development of structured interviews and for collection of data that otherwise would be missed. Descriptive, structural and contrasting questions will provide the framework for interviews. Themes from componential analysis will be fed into the data flow.

Subject journals will be written throughout the study, but will not be written by faculty unless they wish to do so. Student journals will be written during two semesters of blocked methods courses, during student teaching and through the first, second, fourth, sexth and eight year of teaching. (The number of years depends upon the year of

entry into the preservice or inservice program. Persons who leave the profession will be studied if at all possible.) The journals will be referred to as process journals. During the second semester of journal writing, the subjects will be invited to develop intensive, focused journals. This type of journal is intended to be an instrument for personal feedback to the student and teacher and a means for understanding the process of becoming a teacher. Journals will be read by the investigator who will dialog with the journal writer to the degree that the journal writer requests. Strict confidentiality will be maintained by (1) informing the subjects of the process, (2) informing them who will read the journals and (3) helping each student who asks to understand the dynamics of journal writing. Research associates selected for their sensitivity to the ethics involved in reading journals will participate in reviewing the journals and analyzing them for trends and categories which seem related to the findings from the analysis of observations and interviews. General, categorical summaries of the journals will be prepared for the data flow. No student or specific event will be identified. The investigator has referred to the work of Progoff in developing the format of the intensive dialog journals. (Yinger and Clark)

Consultants will confer with the major investigator and research assistant during regularly scheduled sessions

at least once each year. It is anticipated that some of the consultants will be invited to join integration sessions. As a result of the consultation discussion, modifications in the research methodology and design may be forthcoming. It is assumed that a longitudinal study over a ten year period of time will need revision as a result of conclusions drawn, as a result of data integration and other unforeseen events. An essential characteristic of the consultant group is their orientation to and appreciation of the nature of curriculum inquiry which process focused on decision making phenomena.

Critical events are seen here as occurrences within the context of institutional decision making which results in marked impacts on setting, subjects and resources. Identification of critical events can be determined by any participant, but in all probability they will surface as the actors in the setting report events in the qualitative data collection methods. Events will be fully described and analyzed.

First-year quantitative data sources include (1) institutional, faculty and student background information, (2) student grade point average and (3) student scores on three measures.

The Meyers-Briggs type indicator which contains indices for determining the structure of a subject's personality was selected as a useful instrument for ascertaining a subject's

personality preference (Briggs-Meyers). There are four indices of preference which are postulated to affect an individual's choices between extroversion or introversion, sensing or intuition, thinking or feeling and judgement or perception. The selection of this instrument was made by one CDM on the basis of the individual's judgement that knowing about the subject's basic preferences would have an impact on curriculum decisions.

The Cornell Critical Thinking Test was selected as a measure to be included in the quantitative data base because of the importance of the teacher's ability to reason logically within the context of their practice (Ennis). Ennis has stated clear arguments as to the need for logical teaching which have been seen as compelling to this investigator over a number of years and has focused her research on teaching and supervision. Emphasis on the need for teachers to become reasoned in their practice appears with consistent and recurring persistence in the reviews of the study of teaching (Smith). The Cornell Test focuses on ten aspects of critical thinking. Ennis and his associates define critical thinking as "the reasonable assessing of statements." This definition has been used in numerous research studies including a study of student teaching (Cohan).

The Perry Scale is intended to measure "Aspects of Intellectual and Ethical Development" and described development

in an orderly manner using a scale which identifies individual stage development (Perry). The Scale was selected for use by a CDM who felt that information revealed by the instrument would be significant data to consider in understanding individuals who are experiencing and/or developing curricula. The Scale is used frequently by investigators studying college students.

REPORT OF THE FINDINGS

There will be several modes for reporting findings. Reports will be categorized by data which relate to the answers of the research questions. Other reports will discuss thematically the nature of curricular decision making in teacher education. There will also be reports which are data based suggesting approaches to: curricular design, research focused on hypothesis testing, goal oriented evaluation, admission to teacher education, certification, accreditation, teacher evaluation, institutional management, and instructional strategies. Major findings will be reported by the investigator each year. Other findings which emerge from the above categories through doctoral dissertations or co-authoring with the investigator may be reported at other times.

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PART II

FIRST REPORT

FIRST NARRATIVE DISCLOSURE OF TRIANGULATED INQUIRY
TEACHER EDUCATION CURRICULUM - A LONGITUDINAL STUDY

During the summer of 1982 the investigator became interested in a longitudinal study of a teacher education effort in order that those of us involved in the preparation of teachers might have an extensive, over time account of what we do as we prepare teachers at the preservice and inservice levels.

A recurring query in teacher education focuses on goals. What are the relationships between our goals for teaching and teaching as practiced by those who experience our preparation programs? This is a tough question, no doubt. Do we prepare and plan our teacher education curriculum with our expectancies for teaching in mind? What do we expect? What are our goals? Is there a process for knowing what teachers in preparation do learn in relation to what they will do in practice?

An assumption is made in preservice and inservice teacher education that we can prepare teachers to practice teaching in a manner which has predictability with regard to educational environment desired and learner goals. Hopefully, we want to prepare teachers who place priority on humane values, who trust self and others, who see knowledge as an extension of the uniqueness of individuals, who use method oriented towards growth and conditions for learning that involved students in shaping their own education. Seeking educational practitioners who are oriented as outlined here reveals a view of educational institutions in which teaching takes place in settings which educate fully. A longitudinal study such as this one can shed light over time on these questions and assumptions.

The first phase of the study reported here has been guided by the following questions and the conclusions reported address them. What is happening, when, to whom, why and where?

The study is in every respect a case study using ethnographic type methods for data collection which will be illuminated

by selected quantitative analysis. The study has been approached in a holistic manner employing multiple processes for design, data collection and analysis. Progressive refinements of the study are highly dependent upon heuristic discovery of variables as they take place naturally. The investigator is considered one of the research instruments. (Green and Wallet)

Overview

This report is organized in three major components. The first is an introduction. The second section deals with a description of data collection. The third section is the essence of this report. It has as its central message a thesis which emerged from thematic analysis through triangulated inquiry.

Triangulated inquiry is described by Sevigny. This approach to research has also been called "Roshomon Effect," "Multi-Facited Panoramic View" and "Indefinite Triangulation." A recent study of teacher education by Nolan evaluating teacher education curriculum used this methodology. (Nolan) The approach compares several phenomena using varied perspectives and multiple procedures at different points in time. "The conceptualization is rooted in ethnomethodological orientations towards interpersonal events." (Sevigny)

There are several aspects or levels in the third section which move the reader from themes and descriptions to more specific statements and incidents. In this process the investigator is attempting to translate meanings which the research effort has and to communicate these to the reader for their consideration.

Data Sources for Triangulated Analyses

Data for the analyses were collected from six sources. These sources were: (1) student journals written during two semesters, (2) participant observations which took place during

the fall semester, (3) a student feedback inventory administered during the last weeks of the second semester, (4) a statement describing teaching written by the students during the first class session in the fall term, (5) student and faculty interviews and (6) different types of quantified data collected in the fall and spring terms. These data were gathered from a test of critical thinking, a measure of intellectual development, a personality scale and student grade point averages. The nature of this report is such that the reader will not find included in the discussion detailed methodological summaries and statistics. That type of information is located in a database, research notes and in subsequent reports of selected aspects of the study which will be prepared for dissemination and inclusion in the data base.

Student Journals

Student journals were kept each semester. Prior to initial classes in fall '82 when the study was introduced to the faculty, two members of the teaching faculty expressed an interest in having students keep journals. One instructor decided to use the journals in a class focused on self/group understanding, another (the investigator) decided to use the journal experience for student personal growth goals, as well as a data source for this investigation. Students were asked to write every day during the first semester. They were also informed that two instructors and research assistants would be reading the journals and that all material was confidential. Readers and instructors were identified. One of the instructors used the journal experience in the second semester, but this time students were given a focus for their writing (which they did not use) and asked to request feedback if they wished. They were also told again of research use and research reader. Journals were not graded, but students were asked to turn them in every two weeks and given credit for part of a course. Readers did not maintain dialogue with the writers, but

occasionally a reader would write brief comments, words of encouragement, suggestions and a few times, a question. The readers and writers did not maintain a thread of communication. Students' writing moved from topic to topic during each two week period. A few students did not keep journals.

Journals have been analyzed using two different types of analysis. Fall journals were read by three assistants who developed categories representing types of content found in journals. Four major classifications were developed with sub-classifications. Thirty-one classifications were developed initially and two additional classifications were added during coding.

Journals written during the spring term were analyzed by each writer. At the end of the term, students were asked to spend a quiet time reading over their journals, reflecting and identifying journal themes. These themes were analyzed by the investigator using the same dimensions of contrast used in analysis of other data sources. A comparison of fall and spring journal analyses produced a number of semantic relationships.

Pariticipant Observations

During the first semester of this investigation sixty-two participant observations were made by trained research assistants whose area of expertise directly relates to the observation process and the phenomena under observation. There were seventeen domains observed and fifty dimensions of contrast were used in making a componential and taxonomic analyses. The domains represented various program experiences planned for students by the faculty teaching in the program. The participant observers took notes on setting, objects, acts, activity, events, time, actors, goals and feelings. The dimensions of contrast focused on the teacher, the curriculum, technique, philosophy, students, and values. The frame of reference used to formulate dimensions of contrast was to select descriptors

of attributes which characterize the way individuals think about educational phenomena. (Combs) The descriptors are not seen here as either desired or undesired. They are descriptive only. A listing of these dimensions appears later in the final discussion.

Student Feedback Inventory

During the last part of the semester students were asked to respond to an inventory about the domains. Results were compared with findings from other data included in triangulation analyses using dimensions of contrast.

What is Teaching Statement

The students spent a brief period of time during the first class of the fall term responding to the question, "What is teaching?" Each student wrote an answer on a small card which was kept by the investigator until data analysis at the end of the spring term. These answers were analyzed using dimensions of contrast and the results compared with other data in the triangulation process.

Interviews

At the end of the fall term research associates interviewed randomly selected subjects from the student and faculty group. An interview schedule was used. Again, the responses were analyzed using dimensions of contrast and compared to findings from other analyses.

Quantitative Inquiry

While the value of qualitative data is an established basis for understanding educational phenomena, the investigator felt that a complementary dimension which describes quantitative aspects and characteristics of the student population would be helpful. These data were used to illuminate information produced using qualitative methods.

Five groups of quantitative data have been collected. They are scores from the Cornell Critical Thinking Inventory,

the Myers-Briggs Personality Indicator, the Perry Scale of Intellectual Development and two Grade Point Average indices. Results from the inventories and the GPA figures were analyzed using ANOVA, Pearson Correlation and Multiple Regression.

The meaning of quantitative findings is discussed in the section on semantic relationships and emerging themes. The Perry and the Myers-Briggs were administered to the group as part of the class focused on self/group understanding. Scores were then used as part of the database for this study. The Cornell was selected by the investigator as relevant information to have describing critical thinking abilities of future teachers. GPA is an important indicator in describing teacher education students since selected admissions may become the rule in the future.

Other Events

The investigator found that several events (domains) took place during the year which could not be anticipated prior to their occurence. Some of these events were planned and some were unscheduled. Scheduled events were faculty meetings and research seminar meetings. Unplanned events were such things as changes in research support, release time for research, student concern meetings, registration and advising problems.

Besides events that could not be anticipated, the investigator found that reaction to the research project had a significant impact on the type of data that could be collected and the attitude of subjects about the research. It is not clear at this point whether or not it was important to embark on a study of a new and fragile program in the context of so many related uncertainties within the ECE unit, department and college. Certainly the event needed to be studied. As the year comes to a close many significant decisions are being made which bear directly on the phenomena under study here. The possibility of an investigator to engage in a study such

as this one depends a great deal on the ability of the environment to handle its unique dimensions. Because the study reached into multiple aspects of teaching and learning gave it its power and also its challenge. As with all difficult questions the way to the answers are not easy., shifting perceptions/priorities manifest original agreement modifications.

All data are not yet collected since the term had to end before some information could be gathered and analyzed. Final interviews are scheduled for the summer. A final inventory is also scheduled.

The investigator will also received feedback on the research from a consultant who agreed to critique the effort and make suggestions. See Appendix A.

Semantic Relationships and Themes

Semantic relationships are embedded linkages between the domains, dimensions of contrast and data sources which suggest themes. In this section each data source will be discussed in its relationship to other data sources. Themes emerging from these linkages will be identified as preambles to the major thesis of this report. The thesis is the foundation for what can be viewed as the meanings and ideas the investigator wishes to shape as conclusions for the initial phase of the longitudinal study.

Domains were identified as components of experience. Dimensions of contrast had major classifications. (teacher, curriculum, technique, philosophy, students and values) Each of these major classifications were sub-classified using descriptors which categorize the sub-classifications as an "open system" which operates without clear-cut goals or objectives or a "closed system" which operates with clearly defined objectives with machinery to reach them, operations for the machinery, and assessments to determine if the objectives were achieved. (Combs) Both of these systems are very useful and appealing. Educators need to be acquainted with the systems

and skillful in using both. Analysis of data sources using open and closed classification categories was fruitful in that the investigator was able to identify embedded linkages and subsequent themes. Sub-classifications are found in Figure 1.

Participant Observation Semantic Relationships

Domains were clearly open systems overall, indicating that faculty were creating process oriented, facilitating conditions. However, five of the domains were clearly management controlled and seemed to be based more on behavioristic psychology while three of the domains were clearly open environments.

Open domains were more open than the closed domains were closed. Interestingly, three other domains were highly open and also somewhat closed, a contrast and a conflict perhaps. Two of these domains were reported by students as valued, suggesting that some students were drawn to conditions using both systems. One of the most open domains was the field experiences and they were also valued as reported by the students. Field experiences with infants and school aged children were the most valued. Two domains were seen as open, but less valued. Two domains were closed, but seen as more valued. The most open domain was a professional development class and the most closed domain was a science/math class.

Themes which emerge from the relationships seem to be that faculty can and do create and use both open and closed systems as they design teacher education curriculum. Students tend to prefer more open systems and hence may indeed be in conflict with what faculty value. Themes developed in the next section contrast what is observed here.

Quantitative Data Semantic Relationships Compared with Other Data Sources

Overall student personality as measured by Myers-Briggs indicate that most students make choices based on the immediate

Dimensions of Contrast

Closed		Open
Behavior management, control or manipulation Based on Behavioristic Psychology	The Focus	Process oriented—facilitating conditions Based on Humanistic Psychology
Expert diagnostician Total responsibility Precise goals or skills Director, manipulator of forces or outcomes	Teacher	Guide, helper Shares responsibility Broader goals Consultant, aid, facilitator
Oughts and shoulds Right answers Prepare for world Specific goals, grades, and evaluation	Curriculum	Process goals Creation of conditions Problem centered Fill needs, create new ones
Industrial model Competition and evaluation valued Administration dominant Emphasis on goal achievemem	Techniques	Personal growth model Cooperative effort stressed Many group decisions Emphasis on intelligent problem solving
Control and direction Great man concept Doubts about motivation	Philosophy	Growth philosophy Democratic Trust in human organism
Passive Teacher as enemy Dependent Lack commitment Conformity Endurance of stress	Students	Active, responsible Teachers as helpers Participate in decisions Involved Creative Concern for others
Simple skills Ends clearly known Conditions for change in teacher control	Values	Broad goals Ends not precisely predictable Humane values

Figure 1

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conditions that surround them rather than the "world of ideas," they rely on sensing rather than intuition; they rely on feeling rather than thinking and they use judging rather than perceiving in relation to conditions around them. However, several students in the group are just the opposite. Others combine one or two different types of preference.

There is a conflict of personality preferences within the student group, not surprising certainly. The preference of the larger group leans toward conflicts with the closed/open system in the domains and suggests a reason why most students reported that they valued contact with children which was an open domain.

Students are characterized by their scores on the Perry as being primarily in the "early multiplicity stage" which means that they probably think "most knowledge is known, teachers know the right way, a student's role is to learn and work hard, peers are an approved source of knowledge, evaluation is the most important issue and convergent processes are primary." Again, there is a range in the student group and so again possible conflict. What appears as another conflict here is a not too frequent preference for open and closed systems. Perhaps students are moving towards another level of maturity. Since the general responses to the question "What is Teaching?" was more closed than open and identified the teacher as the "source of the right way to be," there is every possibility that the group is in conflict because they may be maturing.

Findings from student interviews in December indicate that considerable stress was experienced during the fall term. The stress seemed to be focused on the lack of clearly defined goals and expectations. Faculty responding to interview questions also focused on stress. Both groups of respondents dealt primarily with closed system content. The sample was small, but selected randomly. Never the less, it will be important to examine the content of June interviews. Will there continue to be conflict and reported stress? Spring journals indicate

yes. There were very few class sessions focused on self/group understandings, but they were among the most valued.

The scores on the Cornell Test of Critical Thinking are not in conflict with the students' scores on the Myers-Briggs Indicator. They do not prefer to make choices based on thinking as much as they prefer to make choices on feelings. There are, however conflicts here with the choices of the faculty as they design both open and closed systems which call for the students to do more thinking and of a different order.

Student GPA levels prior to the fall term correlated with their scores on the Cornell. However, GPA after one term did not. This is a difficult relationship to explain since we do not have scores for December. Also, the basis for grades during the fall term were varied and many times influenced by factors that may not influence instructors out of the students' major field. In addition, it is clear in the judgement of this investigator that a significant subjective thread ran through the grading decisions during the fall term. Students were very tense and stressed over grades. They made their feelings known in ways that got a great deal of attention. Lastly, the schedule change put a number of students in jeopardy with quality points. Since the grading options designed for students by the core team and department chair were changed by a higher administrative authority, the faculty and administration were in conflict and without many options for grading which insured student success. The attempt to correlate GPA with critical thinking is for the most part impossible to consider with all of the unusual circumstances surrounding grading in the fall term.

Student Journal Semantic Relationships

Fall journals were frequently concerned with affective topics. There is a relationship here with the Myers-Briggs findings. These journals also focused much of the time on teacher strategies. We know that students preferred to have teachers as the sources of the right answers, but that is not

what they were getting. Not only were the instructors not giving right answers they were asking the students to think, more conflict, more stress. Students saw themselves as passive and conforming, but instructors valued both open and closed systems which called for active student behavior and lots of it.

First term journals focused many times on WORK. Students, according to their Perry scores, thought the role of students was to work, but they did not know how to do the work. The journals reflected closed systems, more conflict.

Spring journals were analyzed by the students and again reflected closed orientations. Themes identified by the students focused on stress maintenance primarily. They said that they had too much work. However, one of the most valued domains reported for the entire year were assignments and examinations. It seems that the spring journals give a clear picture of the conflict which seems to be an emerging theme in this narrative. Content controlled by students in the journals is primarily closed. Content controlled by faculty in the domains is primarily open, balanced if you will.

Student Feedback Semantic Relationships

Students were asked to identify the most valued aspect of the two terms they were completing. Overwhelmingly and almost to a person the focus was the friends that they made. In reviewing the total range of information collected during the year it is this finding that points to the probable and major stressor and conflict producing condition. Students preparing to teach are pleased to be in preparation, they like their instructors and their classes, but it is their relationships with peers that take priority for them. Surely, this is not new information for curriculum designers are enlightened people. Perhaps we have not a match between our curriculum process and the students we are teaching.

The Central Thesis

In order to communicate the meaning of this investigation a thesis has been developed which has been formulated in such a way as to be suggestive with regard to practice in teacher education.

The thesis which the investigator would like the reader to consider is that we are designing teacher education curricula in such a way that we are placing students in more stress and conflict than necessary, and that this stress prevents the enlightened and valued work that we do with students from impacting their lives fully and consequentially the practice that will characterize their professional roles. A prescription which seems in order is to include in our curriculum design, both content and instruction for a thread of inquiry which enables students to examine conflict, be in conflict, resolve conflict and learn about conflict in every manner possible.

What has been described in some detail here and what has been studied over this past year is universally applicable to teacher education curricular practice. Surely, what has been postulated is not new. Much has been said about the thesis set forth and for a long time, but teacher educators have yet to take pervasive action.

Examination of teacher education both preservice and inservice across programs, in research, in the writing of our critics and in the feedback from our graduates reveal the persistent problem of creating a curriculum that speaks to the characteristics of the people we are teaching and the nature of the knowledge they need to become the teachers that we need. Curriculum revision nationally has blatently ignored inclusion of the content and process postulated here. Curriculum revision in teacher education has been predictable in its course from its beginning. Each revision effort tinkers with the same content, the same processes, the same assumptions. They are re-worked and revisited over the decades.

Teacher education curriculum modification should include exploration of new content and process without giving up any of what we know directly relates to effective professional practice, which in turn creates complete educational environments. Specifically, within each domain those who are responsible for curricular decisions may want to analyze sources of conflict and stress and deliberately design content and processes that focus on conflict resolution. Tracking and playing out the consequences of program design and content in relation to personality types, intellectual styles and thinking skills would prove fruitful. Adjusting institutional conditions that allow reduction of conflict should be a priority. A professional school of education does not have to look like every other program in a university setting. Nor does it have to look like every other professional program in the nation. Unique curricula postulates, testing and continual feedback are necessary.

Summary

Very briefly, the purpose of this paper is to share ideas and perspectives which have resulted from a specifically formulated mode of inquiry. The sharing of ideas and propositions is meant to stimulate thinking, hypothesizing and testing within a systemic and dynamic curriculum processing environment.

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edelfelt johnson
511 g street, s.w.
washington, d.c. 20024
202/484-8004

June 17, 1983

Professor Ruth Heidelbach
Department of Curriculum and Instruction
College of Education
University of Maryland
College Park, MD 20742

Dear Ruth,

As you requested I have read carefully and critically your prospectus for a longitudinal study of teacher education curriculum development and the rough draft of your 1982-83 Progress Report. And, then, today I had an opportunity to discuss the basic notions of the research you are beginning.

My long interest and involvement in teacher education probably bias me, but I think you have a significant and unusual project underway. Very few, if any, teacher educators are proposing a comprehensive and continuing examination of their program using the real world of the teacher as a source of data. Even fewer recognize that such study requires time and people who will stay with an institution to give the research stability and continuity.

I encourage you to seek support for your research. If I can help in suggesting sources of outside funding--and if you need written support or endorsement for your proposal I will be glad to write such letters.

You may wish to check out the literature on the programs of reform in teacher education underway at the universities of Florida (Dave Smith, Dean), Kansas (Dale Scannell, Dean) and Northern Iowa (Gerry LaRocque, Director of Teacher Education). I've had contact with these people so feel free to use my name in a letter of inquiry if that is helpful. None of their programs, however, are of the scope and potential importance that your project could be, most particularly if you discover a way to involve faculty in their own development as they do research, develop curriculum, and contribute to the literature.

I hope you will keep me apprised of what you do in the project.

Cordially,

Roy A. Edelfelt

Appendix A